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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,599	12/12/2000	Takashi Fukui	3888.1 US	4983

24247 7590 10/08/2002

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EXAMINER

MEDLEY, PETER M

ART UNIT PAPER NUMBER

2834

DATE MAILED: 10/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,599

Applicant(s)

ODA ET AL.

Examiner

Peter M Medley

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito et al in view of Suzuki et al.

With respect to claim 1, Naito et al discloses in **fig. 2** an ultrasonic motor comprising piezoelectric elements **11** a diaphragm **10** with radially extending teeth.

The reference does not disclose an odd number of teeth.

Suzuki et al discloses an odd number of teeth for the purpose of increasing the rotation performance of the motor.

It would have been obvious to one of ordinary skill in the art to modify the diaphragm of Naito et al for the purpose of increasing the rotation performance.

With respect to claims 2, 5, and 9, in **fig. 2A** Suzuki et al discloses that the slits defined by the teeth are diametrically aligned. The method of making limitation in claim 5 has been given no patentable weight.

With respect to claim 6 and 7, the references do not disclose a separate a base ring and a support ring.

The court has found that the use of a one piece construction would be merely a matter of obvious engineering choice. *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347,

Art Unit: 2834

349 (CCPA 1965). It would have been obvious to, instead of the integral construction of the diaphragm in Suzuki et al, to use a separate base, support, and diaphragm for the purpose of supporting the piezoelectric elements and teeth. The method of making limitation in claim 7 is not given any patentable weight.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito et al in view of and Suzuki et al and Tsukada.

With respect to claims 3 and 4, Naito et al discloses in **fig. 2** an ultrasonic motor comprising piezoelectric elements **11** a diaphragm **10** with radially extending teeth.

The reference does not disclose an odd number of teeth.

Suzuki et al discloses an odd number of teeth for the purpose of increasing the rotation performance of the motor.

It would have been obvious to one of ordinary skill in the art to modify the diaphragm of Naito et al for the purpose of increasing the rotation performance.

The reference further does not disclose a non-correspondence between the waves and slits or teeth and segments.

Tsukada discloses a non-correspondence between the waves and slits or teeth and segments for the purpose of ensuring uniformity between different ultrasonic motors. It would have been obvious to one of ordinary skill in the art to further modify the motor of Naito et al and Suzuki et al by the teachings of Tsukada for the purpose of ensuring uniformity between different ultrasonic motors.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al.

Suzuki et al disclose in **fig. 1** an ultrasonic motor comprising a diaphragm **12** and an odd number of teeth **13**.

Suzuki et al does not disclose a separate a base ring and a support ring.

The court has found that the use of a one piece construction would be merely a matter of obvious engineering choice. *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965). It would have been obvious to, instead of the integral construction of the diaphragm in Suzuki et al, to use a separate base, support, and diaphragm for the purpose of supporting the piezoelectric elements and teeth. The method of making limitation in claim 7 is not given any patentable weight.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Application/Control Number: 09/735,599
Art Unit: 2834

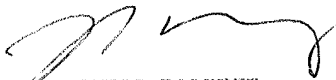
Page 5

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter M Medley whose telephone number is 703-305-0494. The examiner can normally be reached on Monday-Friday 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3432 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

PM
October 4, 2002


NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
FEDERAL BUREAU OF INVESTIGATION